Claims

[c1] Having thus described the preferred embodiment, the invention is now claimed to be:

1 .A light emitting device, comprising:

a nitride compound, for providing at least one of blue and ultraviolet emission;

an epoxy, embedded with a phosphor, mounted to the nitride compound; and

a frame including a surface having an uneven portion contacting the epoxy.

[c2] *2* .The light emitting device as set forth in claim *1* , wherein the compound includes one of binary compound materials, ternary compound materials, and quaternary compound materials.

[c3] *3* .The light emitting device as set forth in claim *2* , wherein the nitride compound is one of a group II through group VI-nitride compound.

[c4] *4* .The light emitting device as set forth in claim *3* , wherein the nitride compound is a group III-nitride including GaN.

[c5] *5* .The light emitting device as set forth in claim *1* , further including:

a substrate, the nitride compound and the epoxy being mounted to the substrate.

[c6] *6* .The light emitting device as set forth in claim *5* , wherein the substrate includes sapphire.

[c7] *7* .The light emitting device as set forth in claim *1* , wherein the uneven portion is a designed surface.

[c8] *8* .The light emitting device as set forth in claim *1* , wherein the phosphor converts the at least one of the blue and the ultraviolet emission from the nitride compound to a visible light, which is emitted from the frame.

[c9] *9* .The light emitting device as set forth in claim *1* , wherein the frame further includes a smooth portion, substantially none of the phosphor embedded epoxy contacting the smooth portion.

[c10] *10* .A system for converting light from a first range of wavelengths to a second range of wavelengths, comprising:

a semiconductor;

a phosphor embedded epoxy contacting a first end of the semiconductor; and
a frame contacting the phosphor embedded epoxy.

[c11] *11* .The system for converting light from a first range of wavelengths to a second range of wavelengths as set forth in claim *10* , wherein:
the first range of wavelengths includes blue/ultraviolet light; and
the second range of wavelengths includes visible light.

[c12] *12* .The system for converting light from a first range of wavelengths to a second range of wavelengths as set forth in claim *10* , wherein:
the first range of wavelengths is greater than about 10 nanometers and less than about 500 nanometers; and
the second range of wavelengths is greater than about 400 nanometers and less than about 800 nanometers.

[c13] *13* .The system for converting light from a first range of wavelengths to a second range of wavelengths as set forth in claim 10, wherein the semiconductor includes:
a substrate;
a nitride compound, for providing at least one of blue and ultraviolet emission, mounted on a first end of the substrate, the phosphor embedded epoxy being mounted on a second end of the substrate.

[c14] *14* .The system for converting light from a first range of wavelengths to a second range of wavelengths as set forth in claim *13* , wherein the nitride compound includes one of binary compound materials, ternary compound materials, and quaternary compound materials.

[c15] *15* .The system for converting light from a first range of wavelengths to a second range of wavelengths as set forth in claim *13* , wherein the substrate is sapphire.

[c16] *16* .The system for converting light from a first range of wavelengths to a second range of wavelengths as set forth in claim *10* , wherein the frame includes a designed surface, substantially all of the phosphor embedded epoxy contacting the designed surface.

[c17] *17* .A method of manufacturing a solid state lamp, comprising:
mounting a phosphor embedded epoxy to a first end of a semiconductor including a

nitride, which provides at least one of blue and ultraviolet emission; and

mounting the first end of the semiconductor to a frame via the phosphor embedded epoxy.

[c18] *18*.The method of manufacturing a solid state lamp as set forth in claim *17*, further including:

creating a designed surface on the frame, the second end of the semiconductor being mounted to the designed surface.

[c19] *19*.The method of manufacturing a solid state lamp as set forth in claim *17*, further including:

attaching an electrical contact to the semiconductor die.